

SECTION 2. DESCRIPTION OF REQUIRED SERVICES AND DELIVERABLES

2.1 BACKGROUND

The State of Maryland seeks to supplement its in-house expertise managing information systems projects and activities as it's spending on information technology (IT) products and services (including telecommunications products and services) increases to nearly \$600 million annually. Increasingly State agencies are turning to management and information technology contractors instead of their own staff to develop, operate and maintain these systems. Managing these efforts by contract instead of in-house requires additional and different kinds of technical and management skills that are in short supply not only in the public sector, but in the private sector too.

This Consulting Services Procurement (CSP) is a procurement vehicle designed to provide a broad range of information technology engineering and management consulting support services to Maryland State government agencies. The State intends to award up to five (5) contracts to qualified offerors to provide the services for the areas of expertise described below. Through the use of the contracts resulting from this procurement, the Office of Information Technology and State agencies will have a flexible means of obtaining IT consulting services resources quickly, efficiently, and cost effectively. This procurement is not intended and shall not be used for staff augmentation purposes.

2.2 SCOPE OF WORK

The scope of this contract encompasses the following areas of expertise:

- 1) IT and Telecommunications Financial and Auditing Consulting Services - (See 2.3.1)
 - A. Cost and Financial Analyses
 - B. Information Systems Auditing and Quality Assurance
 - C. Telecommunications Systems Management
- 2) IT Management Consulting Services - (See 2.3.2)
 - A. IT Enterprise Architecture Development
 - B. Systems Review for Architectural Consistency
 - C. Strategic Planning Assistance
 - D. Project Management Services
 - E. Vendor Assessments
 - F. Risk Assessment Analysis
- 3) Subject Matter Experts Services - (See 2.3.3)
 - A. Vertical Subject Experts (i.e., healthcare, transportation, economic development, education, public safety, etc.)

- B. Technical Subject Experts (i.e., security, project management, mainframe application, internet application, telecommunications, etc.)

4) Business Process Consulting Services - (See 2.3.4)

The State wishes to create strategic relationships that will help the Office of Information Technology (OIT) and to help State agencies increase their capacity to manage both the business and technical facets of information systems projects. One goal of the relationships is to enhance the State's capacity for managing IT activities both contracted and in-house. This requires that contractors be committed to both knowledge transfer and the professional development of Maryland State employees. Another goal is for the State to have a partner representing the public's interest in its potential and on-going relationships with its contractors for a myriad of IT products and services. The State Ethics Law, State Government Article 15-508, applies to persons that are involved in the drafting of specifications which are prohibited from participating in the implementation of those specifications if whether a prime or subcontractor. The State Ethics Law may apply to TOs issued to Contractors under the CSP.

The purpose of the CSP is to provide the State of Maryland with services to make informed decisions regarding IT management, including topics such as acquisitions, project management, architecture and infrastructure, and industry and market trends. Offerors shall provide skill sets such as financial and cost analysis; strategic planning; subject matter expertise in key vertical areas that may be enabled by IT (i.e., healthcare, transportation, economic development, education, public safety, etc.) to assist State agencies with IT projects in support of agency missions. Samples of work required are described in detail in Section 2.3 Statement of Work for Areas of Expertise - Descriptions.

The Contractors shall provide the supervision and management effort necessary for efficient and effective administration and control of work performed under the CSP. The Contractors shall ensure that adequate resources are allocated to satisfy the requirements of work assignments.

The Scope of Services contained herein is intended to outline the general Contractor requirements under the CSP. Specific details of work assignments, deliverables, documentation, training, applicable State/departmental/industry standards, etc., will be provided in each individual Task Order

2.3 STATEMENT OF WORK FOR AREAS OF EXPERTISE- DESCRIPTIONS

2.3.1 IT and Telecommunications Financial and Auditing Consulting Services – Contractors must be able to provide the following:

- A. Cost and Financial Analyses – As State agencies evaluate proposals from contractors to develop information technology and telecommunications solutions, the State would like to have the capability to provide a “third-party” review of

cost factors associated with the recommended solutions. Third-party reviews may include such analyses as project return on investment, total cost of ownership, and IT project portfolio analysis. Examples of work to be performed under Task Orders may be as follows:

- 1) Perform independent studies of proposed IT projects, products and services costs and benefits to determine cost-effectiveness.
- 2) Perform independent verification and validation (IV&V) analyses of cost proposals and cost/benefit analyses for solutions submitted by the contractors in response to agency solicitations.
- 3) Provide total cost of ownership analysis that includes the entire range of cost categories required for any given project. The cost categories subject to analysis will depend on the particular project. The total cost of ownership may include: acquisition, facilities, equipment, operations, maintenance and repairs, and other costs such as, nonrecurring, recurring, direct and indirect, fixed and variable, and research and development.
- 4) Help establish baseline cost and benefits for State IT projects based on historical data to serve as benchmarks for planning and evaluating proposed IT projects;
- 5) Provide financial management for projects and recommend procedures and processes for improving project financial management.

B. Information Systems Auditing and Quality Assurance - State agencies perform quality assurance audits of IT systems to ensure that systems perform to documented specifications in such areas as: data security, customer privacy, data accuracy, accurate business processes, and customer satisfaction. In support of these efforts, the State requests auditing expertise to either perform or validate internal quality assurance audits for large- and medium-scale information technology projects in various environments (i.e., mainframe, mini computers, client/server, WAN/LAN etc.). Examples of work to be performed under Task Orders may be as follows:

Validate or perform quality assurance audits of IT systems during the development process and report to a State agency on findings and recommend mechanisms to correct the issues identified in the audits. Quality assurance audits for IT systems may include:

- a) data input,
- b) data manipulation,
- c) data output,
- d) programming logic,
- e) data security,
- f) network security,
- g) application security,
- h) customer privacy,
- i) data management and storage,

- j) contingency plans,
- k) disaster recovery,
- l) selection of hardware,
- m) selection of software,
- n) customer satisfaction,
- o) user satisfaction, and
- p) other areas as requested.

Develop an action plan that corrects audit findings and report to the State agency on the results of these corrective actions.

C. Telecommunications Systems Management - DBM provides many telecommunications contracts to State agencies for their use. The State requires auditing services for quality control and for recommendations on consolidating activities spread among several contracts to obtain cost efficiencies through consolidation and other means. Examples of work to be performed under Task Orders may include:

- 1) Evaluate and report on how State telecommunications contracts may be combined, streamlined, or otherwise improved to work for the State more efficiently. Provide assessments of configuration and performance of telecommunications systems and contract vehicles. Analyze costs and benefits for telecommunications systems and provide recommendations based on maximizing return on investments for alternatives to current and proposed systems.
- 2) Monitor the implementation of accepted recommendations or improvements and provide feedback on level of improvements.
- 3) Provide recommendations on telecommunications services including:
 - a) Engineering and technical support for Statewide telecommunications projects and services;
 - b) Planning, design, cost/benefit analyses, assessment of configuration and performance, development, implementation and resource levels for telecommunications systems and processes;
 - c) Statewide telephone services;
 - d) Statewide teleconference and video conference services;
 - e) Two-way radio services;
 - f) Personnel paging systems;
 - g) Broadcasting;
 - h) Telecommunications network security; and
 - i) Voice/call processing applications.

2.3.2 IT Management Consulting Services

- A. IT Enterprise Architecture Development – Provide enterprise architecture plans and recommendations to support the development of information resources (IR) (including both information and IT) architecture for the State. The IT architecture may require the integration of numerous systems and subsystems. Management of the systems being integrated and information on the potential impact(s) to other systems are imperative for the development of the IR architecture. State agencies impacted by proposed changes to the IR architecture may require assistance in the preparation for changes and management of their IT systems. Examples of work to be performed under Task Orders may be as follows:
- 1) Document and assess the current condition of the State’s enterprise IR architecture(s). This analysis may require documentation at the system or subsystem level.
 - 2) Recommend an enterprise IR architecture for the State with potential interim steps or phases for implementation based on the current condition survey mentioned above.
 - 3) Provide recommendations for the development, implementation, assessment and maintenance of architectural principles, policies and practices.
 - 4) Provide data architecture, applications architecture, technology architecture, enterprise architecture planning, information systems architecture, and architecture trade-off analysis.
 - 5) Conduct analyses and provide architecture impact assessments of proposed changes in information resources as directed.
 - 6) Provide expertise to identify opportunities for integration and economies of scale across systems and/or organizations through the development or creation of enterprise architecture.
 - 7) Provide consultation on architecture improvement and recommendations on coordinating IT investments and initiatives across the various State agency’s business processes.
- B. Systems Review for Architectural Consistency – State agencies may require engineering assistance to integrate systems with new architectural standards and common infrastructures. In particular, State agencies may require recommendations for systems development, acquisition, and operations and to leverage common infrastructures effectively among various agency missions and services. Such application reviews may cover a variety of IT system environments from simple personal computer (microprocessor) and workstation applications; to local area networks (LAN); and wide area networks (WAN), to distributed processing systems; to web-based interactive

systems; to large and very complex mainframe database and file management systems that utilize remote batch processing and interactive teleprocessing. Examples of work to be performed under Task Orders may be as follows:

- 1) Assess system design of applications to ensure consistency between systems and enterprise architectures and best integration with common infrastructure before development (i.e., code generation).
- 2) Evaluate and determine the adequacy and appropriateness of the proposed systems architecture and applications for the system being planned.
- 3) Assess risks related to systems development plans and change proposals to existing and target architecture at the systems and enterprise levels

C. Strategic Planning Assistance – State agencies set goals and objectives related to their functional business services and their information technology projects, often through a strategic planning process. State agencies may require assistance in developing long range agency-wide information technology plans, IT-enabled business plans, and program effectiveness measures related to proposed IT investments. Additionally, State agencies may request assistance with agency-level strategic planning for IT to ensure consistency with State-level (i.e., enterprise) plans and initiatives. Examples of work to be performed under Task Orders may be as follows:

- 1) Analyze customer and citizen demand for attitudes about, and interest in IT-enabled services that state agencies might develop
- 2) Evaluate emerging technologies and assist agencies with planning the tactical and strategic migration of business services to these emerging technologies.
- 3) Develop information systems strategic plans that align agency technology plans and business programs with State technology programs and with State government business objectives.
- 4) Perform strengths, weaknesses, opportunities, and threats (SWOT) analyses, critical success factor analyses, strategic business planning, strategic information systems planning, electronic government assessments, and other techniques used to establish strategic information technology plans.

D. Project Management Services - State agencies often manage many different IT projects simultaneously. To ensure successful management of these various efforts, State agencies may want to retain the services of a third-party project manager for IT projects. Contractors would be required to supply State agencies with IT project management support to work as facilitators between State agency representatives and management or IT contractors. The project manager would be responsible for representing the State's interest in ensuring that products are delivered on time, within budget and within scope. Examples of work to be performed under Task Orders may be as follows to assist State

employees to:

- 1) Ensure strategic alignment of projects by setting project objectives in line with stated agency needs.
- 2) Provide project planning, prioritization of tasks, scheduling, projections of staffing requirements, and performance measurements to include:
 - a) Identify critical path, benchmarking, unit testing, system testing, and user acceptance testing,
 - b) Monitor progress of projects, and resolve issues; and
 - c) Present management products to State agencies such as, work breakdown structures, charts, tables, graphs, major milestone calendars and diagrams to assist in analyzing problems and making recommendations.
- 3) Assist State agencies with project management by managing resources; delegating tasks; receiving, gathering and disseminating information; setting goals; motivating people; understanding technology projects and preparing contingency plans when deadlines are delayed.

E. Vendor Assessments - State agencies are charged with accomplishing a tremendous amount of work with limited financial resources. Thus, it is critically important that State agencies expend funds most efficiently and manage IT and telecommunications projects very wisely. Because State agencies need to hire vendors for various projects, Contractors may be asked to provide independent, third party assessments of vendors. Examples of work to be performed under Task Orders may be as follows:

- 1) Provide a review of a vendor(s) as identified in a Task Order. Provide ratings and evaluations including the following:

Vendor(s) specific:

- Code of ethics and business practices,
- Financial status including assets, liabilities, operating capital, cash flow, insurance coverage, annual reports, legal history, etc.,
- Ranking among peers in the industry,
- Personnel qualifications; and
- Reputation in the industry.

Project specific:

- Customer satisfaction levels in performing projects,
- Strengths and weaknesses in performing projects,
- Project management methodology applied to projects and results; and
- Projects performed on time, on budget and within scope.

F. Risk Assessment Analysis – The purpose of a State agency asking for a risk assessment analysis of an IT application, system or project may be to assess the risks associated with costs, benefits, schedule, technical performance, human factors, safety and security. The analysis may include provisions for identifying risk areas, assessing risk factors, recommending appropriate resources to reduce risk factors, identifying and analyzing alternative actions available, identifying the most promising alternatives, and planning for implementation of risk reduction. Examples of the work to be performed under Task Orders may be as follows:

- 1) Assess risks and review technical risk assessments of an IT project including subsystem designs, architectures, and computer systems in terms of their impact on costs, benefits, schedule and technical performance. Perform cost and schedule risk assessments to support various alternatives to meet mission need, recommend alternative courses of action when one or more interdependent segment(s) or phase(s) experience a delay, and recommend opportunities for new technology insertions.
- 2) Provide fraud detection and prevention expertise on services to internal and external customers.
- 3) Perform technical risk assessments at various points in the system life cycle. Identify areas of technical risk when translating operational requirements into system level requirements. Develop and/or evaluate potential methods of dealing with technical risks. Update evaluations in order to determine and forecast operational needs and changes. Provide presentations on reporting and operational enhancements. Develop operational management reporting tools and programs to prevent or mitigate risks.
- 4) Provide and/or develop risk management policies, procedures and guidelines on risk limits.

2.3.3 Subject Matter Experts

A. Vertical Subject Experts – The State recognizes the need for subject matter experts in both the formulation of specifications and in the execution of technical initiatives in vertical areas. State agencies require expertise that supports IT projects but are not necessarily IT related. The supporting expertise is required to administer technical projects in specific service areas. Such services may be comprised of various elements at different levels and require the knowledge of a subject matter expert in a particular discipline such as health care, education, public safety, social services, human resources, transportation, environment, etc. Examples of the work to be performed under Task Orders may be as follows:

- 1) Provide expertise in the formulation of the IT component specifications and in delivering technical initiatives in a specified vertical area.

- 2) Define requirements, perform analyses, develop plans and provide recommendations on how to incorporate the vertical area discipline requirements into the IT project.
- 3) Evaluate proposals from prospective contractors.

B. Technical Subject Experts – The purpose of requesting Contractors to provide technical experts is to obtain technical expertise and guidance support for State agencies and for Statewide IT projects and services. Technical expertise and guidance may be required for any or all of the life cycle phases such as: design, planning, development, testing, implementation, operations and maintenance. Examples of work to be performed under Task Orders may be as follows:

- 1) Provide high-level planning for the systems used by the State.
- 2) Provide designs and applications to ensure overall technical integrity.
- 3) Perform process and data modeling for the planning and analyses of automated tools.
- 4) Provide recommendations for improvements in IT services and products.

2.3.4 Business Process Consulting Services

State agencies may require assistance in streamlining business processes within an agency and also streamlining business processes that cross over various agencies to eliminate redundancy and increase productivity. Contractors will be requested to provide appropriate personnel to support the business process reengineering project to improve processes as requested in a Task Order. Examples of work to be performed under Task Orders may be as follows:

- 1) Collect information sharing and business requirements from State agencies to use in the development of new systems and the reengineering of legacy systems. Analyze existing work flow processes and define business requirements and recommend improvements to or reengineering of business work flow processes in order to meet identified business requirements.
- 2) Coordinate business process improvement initiatives across the lines of business of either a single agency or multiple State agencies.
- 3) Analyze the operational, technical and economic risks of reengineering efforts.
- 4) Assist State agencies with change management planning and the execution of reengineered business processes.
- 5) Document the reengineering methodologies utilized to recommend improvements in business processes and the methods of implementation.

- 6) Assist agencies in developing technical solutions for information technology projects for recommended business process improvements, which includes requirement analysis.

2.4 INFORMATION PERTAINING TO TASK ORDERS (TOs)

TO Requests will be initiated by the State which will define the scope and requirements of the TO. At a minimum each Task Order Request will contain the following information:

- The type of task order agreement (FP or T&M) with compensation and method of payment;
- The nature of the financial submissions;
- The due date, time, and place for bidding on the TO;
- Technical requirements;
- Performance objectives and/or deliverables, as applicable;
- Specific information to be provided by Contractors, such as: (1) a proposed work plan for the required services; (2) Contractor experience or capabilities; and, (3) personnel to perform the required services; (Also, see Section 2.9.);
- Project and technical points of contact, and, if appropriate, Agency Task Order Contact;
- Timeframe to complete the services required;
- Place(s) where work must be performed;
- State furnished information, work site, and/or access to equipment, facilities, or personnel;
- Award selection criteria, and relative weight of each criterion and price; and,
- Minority Business Enterprise Goal.

2.5 TASK ORDER RESPONSE REQUIREMENTS

All Task Order Requests will be sent to all Contractors awarded a Master Contract under this RFP except that Task Order Requests will not be sent to contractors for whom there has been identified an existing or potential conflict of interest. Contractors who receive a Task Order Request, and who would have an existing or potential conflict of interest if awarded the TO, shall immediately return the Task Order Request to the State Project Manager with a written notification of the conflict.

Each Contractor must respond to each Task Order Request with either a Task Order Response or a written notification to the State Project Manager that it does not intend to submit a Task Order Response and the reason(s) why. If a Contractor elects to submit a Task Order Response, the Contractor shall do so in conformance with the requirements of the Task Order Request. At a minimum the Task Order Response shall provide the following:

1. A complete description of the proposed work plan including time schedules, in narrative and GANTT chart formats, to accomplish the requisite tasks of the TO. This description shall include a schedule of resources and related tasks, including an explanation of how these tasks will be completed.
2. Those activities or phases that can be completed independently or simultaneously versus those that must be completed before another activity or phase can commence.
3. The personnel resources and estimated hours (by labor categories for T&M TOs) to complete the tasks identified. Key personnel who will work on all TOs must be identified. Resumes must be provided for all personnel that are proposed to work on TOs. Personnel described in the TO Response must be committed to the Project for its duration. Changes will only be permitted for death or termination of employment with Contractor, its subsidiaries and affiliates.
4. An estimate of staff time to be required of State employees associated with this project.
5. A detailed written description of any work to be subcontracted, the name and address of the proposed subcontractor(s), including MBE subcontractors, and the proposed contractual agreement with the subcontractors.
6. Proposed approach to satisfying the requirements of the TO and development of TO deliverables.
7. Proposed cost or price.
8. Economic Benefit to Maryland that will result from the Contractor's performance of a TO.
9. Explanation of how the Contractor intends to meet the stated TO MBE requirement.

2.6 PROCEDURE FOR AWARDDING A TO

The criteria for making a TO award determination and the relative weight of each criterion and price will be detailed in the Task Order Request.

2.7 COMMENCEMENT OF WORK UNDER A TO

Work in response to a TO shall be initiated only upon issuance of a fully executed TO Agreement or by a Notice to Proceed authorized by the State Project Manager.

2.8

RIGHT OF STATE TO DISCONTINUE OR SUSPEND PARTICIPATION OF A CONTRACTOR

If a Contractor either repeatedly fails to respond to Task Order Requests, or repeatedly declines to bid, the State may provide a written warning that continued non-responses/non-participation would jeopardize the continued participation of that Contractor in the CSP. If after receiving such warning the Contractor still does not respond to, or declines to bid on, Task Order Requests, upon additional written notice, the State may discontinue allowing that Contractor to participate in future Task Order Requests for the remaining duration of the contracts issued under this RFP. If the State determines that a Contractor is having difficulty in performing one or more TOs, upon written notice to that Contractor, the State may suspend the participation of that Contractor in future Task Order Requests until such time as the State is satisfied with the performance of that Contractor.

Under either of the scenarios described, above, upon receipt of such notice the affected Contractor may seek to explain its actions or lack of action, or refute the State's contention. The State will give due consideration to such remarks before deciding whether to implement any proposed action or continue with a described sanction.

2.9

LABOR CATEGORIES AND QUALIFICATIONS

The following section describes the labor categories to be provided under the RFP. Offerors must propose only these labor categories for T&M type of TOs. All described requirements are **minimum** requirements for the respective labor categories. **Required skill levels may change according to services requested in each TO. No other labor categories may be proposed.**

Program Manager

Duties: The Program Manager is the contractor's manager for the overall CSP contract, and serves as the single point of contact for the contractor with the State regarding the contract. Performs overall management for contract support operations. Organizes, directs, and coordinates the planning and production of all contract activities, projects and support activities, including those of subcontractors. Oversees the development of or develops work breakdown structures, charts, tables, graphs, major milestone calendars and diagrams to assist in analyzing problems and making recommendations. Demonstrates excellent written and verbal communications skills. Establishes and alters corporate management structure to direct effective and efficient contract support activities. Must be capable of negotiating and making binding decisions for the Contractor.

Education: Bachelor's Degree from an accredited college or university in Engineering, Computer Science, Information Systems, Business or other related discipline. Master's degree and/or project management certification is preferred.

General Experience: At least twelve (12) years experience in program or project management.

Specialized Experience: At least eight (8) years of experience in supervision or oversight of IT related programs or projects.

Project Manager

Duties: The Project Manager is assigned the management of a specific project and the work performed under assigned Task Orders. Performs day-to-day management of the project, identifies issues and risks and recommends possible issue and risk mitigation strategies associated with the project. Is responsible for ensuring that work performed under Task Orders is within scope, consistent with requirements, and delivered on time and on budget. Provides solutions to improve efficiency (e.g., reduce costs while maintaining or improving performance levels). Monitors issues and provides resolutions for up-to-date status reports. Demonstrates excellent writing and oral communications skills.

Education: Bachelor's Degree from an accredited college or university in Engineering, Computer Science, Information Systems, Business or other related discipline. Master's degree or project management certification is preferred.

General Experience: At least ten (10) years experience in project management.

Specialized Experience: At least five (5) years of experience in managing IT related projects and must demonstrate a leadership role in at least three successful projects that were delivered on time and on budget and delivered which promised business value.

Senior Cost Accountant

Duties: Provides cost estimating and financial management support, including all activities which occur during the life cycle of an information technology application or system. Conducts investment analyses or other complex operational analyses. Provides expertise and support in conducting a full range of investment analyses activities, including market surveys, cost analyses, benefits analyses, risk analyses, economic analyses, requirements definitions, schedule development, and tradeoff studies. Supports architecture efforts including economic analyses of architecture alternatives, architecture issues resolutions, and affordability analyses. Conducts analytical studies involving complex technical analyses, schedule constraints, and system benefits and system cost factors. Identifies cost accounting or financial problems and recommends solutions. Presents plans, analyses, and other advice within functional areas.

Education: Bachelor's Degree from an accredited college or university in Economics, Business, Accounting, Finance, or related discipline. A Master's degree and CPA are preferred.

General Experience: A minimum of eight (8) years relevant experience as a cost analyst or involved in analysis in business-related subject areas such as accounting, finance or economics.

Specialized Experience: At least five (5) years experience in financial cost accounting with demonstrated success in analyzing information systems.

Senior Financial Analyst

Duties: Provides financial management planning and execution support. Has knowledge of theories, principles and practices of financial management, including time value analyses, cash flow analyses and cost/benefit and return on investment analyses. Conducts investment analyses or other complex operational analyses. Provides expertise and support in conducting a full range of investment analyses activities, including market surveys, cost analyses, benefits analyses, risk analyses, economic analyses, requirements definitions, schedule development, and tradeoff studies. Supports architecture efforts including economic analyses of architecture alternatives, architecture issues resolutions, and affordability analyses. Classifies and summarizes financial data for the preparation and submission of reports on a recurring basis. Must be able to apply financial analysis to information systems issues.

Education: Bachelor's Degree from an accredited college or university in Economics, Business, Accounting, Finance, or related discipline. A Master's degree and CPA are preferred.

General Experience: At least eight (8) years progressive experience as an analyst or involved in analyst type functions in a business related subject area such as accounting, finance or economics.

Specialized Experience: At least five (5) years of financial management experience with demonstrated ability in analyzing information systems.

Senior Operations Research Analyst

Duties: Conducts investment analyses or other complex operational analyses. Provides expertise and supports evaluations of program results and potential changes to program results related to IT investments along with an analysis and presentations of alternatives. Provides operational analyses support to all phases of the life cycle of an information system. Conducts operational analyses of existing systems using performance measures, criteria, and standards to determine requirements for needed changes. Evaluates, selects, and uses the tools of modern operations research (such as commercially available decision and analytical support software tools) to conduct analyses of projected changes to system or program performance. Supports architecture efforts including economic analyses of architecture alternatives, architecture issues resolutions, and affordability analyses.

Education: Bachelor's Degree from an accredited college or university in a related field, with at

least 24 semester hours in a combination of mathematics, probability, statistics and logic. Master's degree preferred.

General Experience: Must have eight (8) years experience in operations research.

Specialized Experience: At least five (5) years experience in conducting quantitative analysis using operations research tools, econometrics, or other quantitative techniques.

Senior Systems Analyst

Duties: Serves as a computer systems expert on assignments that typically involve establishing automated systems, where concern is with overall life cycle structure; and conducts feasibility studies from design, implementation and post-implementation evaluation from a number of possible approaches. Design criteria must be established to accommodate changes in legislation, mission, or functional program requirements.

Education: Bachelor's Degree from an accredited college or university in Computer Science, Systems Analysis, Information Systems or a related field. A Master's Degree in a related field of information technology is preferred.

General Experience: A minimum of eight (8) years of experience in information technology systems analysis.

Specialized Experience: At least five (5) years of the experience in the design of business applications on complex IT systems. Requires a broad knowledge of data sources, data flow, system interactions, advanced computer equipment and software applications, and advanced systems design techniques to develop solutions to unyielding complex problems and to advise officials on systems design and ADP forecasts.

Senior Quality Assurance Consultant

Duties: Provides quality management for information systems using the standard methodologies, techniques, and metrics for assuring product quality and key activities in quality management. Establish capable processes, monitoring and control of critical processes and product mechanisms for feedback of performance, implementation of an effective root cause analysis and corrective action system, and continuous process improvement. Provides strategic quality plans in targeted areas of the organization. Provides quality assurance (QA) strategies to ensure continuous production of products consistent with established industry standards, government regulations and customer requirements. Develops and implements life cycle and QA methodologies and educates, and implements QA metrics.

Education: Bachelor's Degree from an accredited college or university in Engineering, Computer Science, Information Systems or other related discipline. A Master's degree preferred.

General Experience: At least eight (8) years information systems quality assurance experience.

Specialized Experience: At least five (5) years experience working with statistical methods and quality standards. Must have good QA/process knowledge and possess superior written and verbal communication skills.

Senior IT Auditor

Duties: Identifies information processing and technology risks. Evaluates controls and makes recommendations. Identifies problems and recommends solutions. Reviews the installation and security related controls for a wide variety of computing platforms, including operating systems, sub-systems, databases and software products used to support the processing environment. Prepares and performs audit tests and evaluates results. Provides documentation of audit tests to facilitate efficient and effective reviews.

Education: CPA required. Bachelor's Degree from an accredited college or university in Accounting, Finance, Business, Computer Science, Information Systems, or related field.

General Experience: At least ten (10) years auditing experience.

Specialized Experience: At least seven (7) years of experience in IT audits. Proficient in generally accepted IT standards, statements and practices and IT security and control practices.

Senior Telecommunications Consultant

Duties: Identifies problems and recommends solutions for telecommunications organizations. Performs process and data modeling in support of the planning and analyses for using automated tools. Evaluates controls and makes recommendations. Provides planning, analyses, strategic planning, design, development, implementation and post-implementation for telecommunications projects.

Education: Bachelor's Degree from an accredited college or university with a major in Telecommunications, Computer Science, Information Systems, Engineering or a related field. Master's degree preferred.

General Experience: At least ten (10) years telecommunications experience.

Specialized Experience: At least seven (7) years experience as a consultant or engineer in the telecommunications field in the private or public sector.

Senior Information Technology Architect

Duties: Provides expertise in the most current principles and practices of architecture data management systems and experience in large system designs, and with data modeling in the information management arena. Provides expertise in modeling and organizing information to facilitate support of projects or information architectures. Provides guidance on how and what to data and process model. Primarily deals with transition planning from legacy to modern systems by concentrating on information flows, data exchange, and data translation standardization services.

Education: Bachelor's Degree from an accredited college or university with a major in Engineering, Computer Science, Mathematics or a related field. Master's degree preferred.

General Experience: At least ten (10) years experience planning, designing, building, and implementing IT systems.

Specialized Experience: At least five (5) years of the required 10 years of experience must be in the direct supervision and management of major projects that involve providing professional support services and/or the integration, implementation and transition of large complex system and subsystem architectures. Must have led or been chief architect in major IT implementation efforts. Must demonstrate a broad understanding of client IT environmental issues and solutions and be a recognized expert within the IT industry. Must demonstrate advanced abilities to team and mentor and possess demonstrated excellence in written and verbal communication skills.

Senior Information Technology Planner

Duties: Provides planning services for a wide range of programs and projects including design, development, implementation, post-implementation and maintenance of the systems. Provides SWOT analyses, critical success factor analyses, strategic business planning, strategic information systems planning, value chain analyses, e-business assessments, and other techniques used to establish strategic plans. Provides expertise in conducting research, evaluations, and studies required to develop both short-term and long-term plans. Provides plans, designs, concepts, and develops both general and specific program and project strategies for linking proposed investments in IT to business results. Provides planning, scheduling, networking and coordination assistance among State organizations involved in implementation and integration efforts. Identifies problems and recommends solutions.

Education: A Bachelor's Degree from an accredited college or university with a major in Computer Science, Information Systems, Planning or other related scientific or technical discipline. A Master's degree is preferred.

General Experience: At least ten (10) years progressive experience as a planner - or involved in planning type functions.

Specialized Experience: At least six (6) years of experience in planning, analyses, design, development, implementation and post-implementation of IT projects or systems.

Senior Application Architect

Duties: Manages major projects that involve providing professional support services and/or the integration, implementation and transition of large, complex systems. Provides design and development of e-government solutions, and is responsible for technical design and implementation of the architecture. Designs, develops and maintains infrastructure and backend applications. Provides expertise on defining the role of broadband and wireless applications. Provides definition of current State architecture blueprints. Provides expertise with web servers, gateways, and application servers and content management systems. Provides experience in web application technologies and middleware solutions. Researches new technologies and products for their applicability to business processes. Must be able to compare various solutions and determine the most suitable. Insures that development efforts are well planned and in agreement with standards.

Education: Bachelor's Degree from an accredited college or university in Engineering, Computer Science, Mathematics or other related scientific or technical discipline. Master's degree preferred.

General Experience: At least ten (10) years of experience planning, designing, building, and implementing IT application systems. Must have led or been chief architect in a major IT applications implementation effort. Must have a strong background in software engineering principles and techniques.

Specialized Experience: At least six (6) years of experience in designing medium to large-scale sites and management of at least five Internet projects.

Agency IT Project Manager

Duties: The Project Manager is assigned the management of a specific project. Performs day-to-day management of the IT project. Acts as a facilitator and project manager between a State agency and IT contractor. Responsible for ensuring that products are delivered on time and on budget, and that an IT system under development is successfully deployed and managed. Provides unbiased technical solutions to improve efficiency (e.g., reduce costs while maintaining or improving performance levels). Identifies critical paths, tasks, dates, testing, and acceptance criteria. Monitors issues and resolutions for up-to-date status reports. Negotiates between agency and IT contractor for best practices to accomplish tasks and produce results. Demonstrates excellent writing and oral communications skills.

Education: Bachelor's Degree from an accredited college or university in Engineering, Computer Science, Information Systems, Business or other related discipline. A project management certification preferred.

General Experience: At least ten (10) years experience in project management.

Specialized Experience: At least five (5) years of experience in managing IT projects managing IT project; and must demonstrate at least three successful IT projects that were delivered on time and on budget.

Senior Auditor

Duties: Provides third party reviews, ratings and evaluations of IT vendors. Researches corporate philosophy, goals, objectives, and code of ethics and business practices. Provides financial status including assets, liabilities, operating capital, cash flow, insurance coverage, etc. Provides financial reports and annual reports. Provides ranking among peers in the IT industry and reputation in the IT industry. Researches customer satisfaction levels and strengths and weaknesses. Provides costing estimations and personnel qualifications and performance ratings. Researches project management results and performance records. Provides legal history and overall performance.

Education: Bachelor's Degree from an accredited college or university in Accounting, Finance, Business or a related field. A CPA is preferred.

General Experience: At least ten (10) years of auditing experience.

Specialized Experience: At least five (5) years experience as an auditor in auditing IT vendors.

Senior Risk Assessment Consultant

Duties: Manages the identification and reporting on risk assessments and updates evaluations in order to determine and forecast operational needs and changes. Provides presentations on reporting and operational enhancements and metrics with special focus on variance analysis. Establish risk management policies and procedures, and guidelines on risk limits. Provides fraud expertise on services to internal and external customers. Develops system enhancements and meaningful reporting and operational management reporting tools and web-based tools and programs to manage, prevent, and mitigate risks. Identifies problems and recommends solutions to risk assessments.

Education: Bachelor's Degree from an accredited college or university in a related field. A Master's degree preferred.

General Experience: At least ten (10) years of risk assessment experience.

Specialized Experience: At least six (6) years of experience in IT risk assessment.

Senior Subject Matter Expert

Duties: The area of expertise may be related to a specific discipline required by the State agency such as health care, education, public safety, social services, human resources, transportation, environment, etc. Requires expertise in the formulation of specifications and in the execution of

technical initiatives in vertical areas. Defines requirements, performs analyses, and develops plans and requirements for systems.

Education: Bachelor's Degree from an accredited college or university in the specific discipline required by the State. A Master's Degree or Ph.D. Degree is preferred.

General Experience: At least eight (8) years of relevant industry experience in the discipline is required.

Senior IT Professional

Duties: Identifies strategic issues for the Information Management Department and advises IT Senior Management of the risks and/or opportunities created by these issues. Issues will be centered on IT measurements and IT project management. IT measurements will encompass the refining or creating of measures related to value creation of IT products and services. Project Management will include presenting recommendations on ways of managing projects more effectively (appropriate methodology, quality reviews, etc.) Accountabilities include coordinating input from various IT departments to develop recommendations, conducting analyses of issues and ensuring adequate communication of the endorsed positions and recommendations to stakeholders.

Education: Bachelor's Degree from an accredited college or university in Engineering, Computer Science, Information Systems, Business, Mathematics or a related technical or business field. A Master's degree is preferred.

General Experience: At least eight (8) years of relevant industry experience in the discipline required.

Senior Telecommunications Engineer

Duties: Provides engineering and technical support for Statewide telecommunications projects and services. Provides designs and applications to insure overall technical integrity. Provides high-level planning for the systems used by telecommunications organizations. Performs process and data modeling for the planning and analyses of automated tools. Provides technical expertise and guidance in engineering techniques and automated support tools. Provides assistance with planning, design, cost/benefit analyses, assessment of configurations and performance measurements, development, implementation and recommendations for staffing levels for telecommunications systems and processes.

Education: Bachelor's Degree from an accredited college or university in Engineering, Telecommunications, Computer Science, Information Systems or other related scientific or technical discipline. A Master's degree is preferred.

General Experience: At least ten years of telecommunications experience.

Specialized Experience: At least six (6) of experience in commercial and long distance network architectural design and engineering.

Senior Business Process Consultant

Duties: Develops business requirements and business processes re-engineering methodologies. Solves application and process related problems by creating detail process and system design specifications; and works with other areas across the business units to support a total solution approach. Communicates business requirements for reports and applications development. Facilitates collaboration within and across business units and across IT functions. Resolves problems and improves business units' technical environments.

Education: Bachelor's Degree from an accredited college or university in Business, Human Resources Management or a related field. An MBA or MPA is preferred.

General Experience: At least eight (8) years experience in business process re-engineering.

Specialized Experience: At least five (5) years of experience in reengineering large scale business processes.

Senior Group Facilitator

Duties: Provides assistance in the group decision-making process by intervening to help a group improve its effectiveness and efficiency through enhanced problem identification, problem solutions and decision-making skills. Takes primary responsibility for managing the group process and assists groups to be more effective by improving existing group practices. Guides groups through proven processes and understands basic group dynamics and interrelationships. Intervenes when it is evident that the group process or other factors interfere with a group's ability to accomplish specific goals and objectives.

Education: Bachelor's Degree from an accredited college or university in Education, the Social Sciences, Human Resources, Business or a related field.

General Experience: At least five (5) years of experience as a group facilitator.

Specialized Experience: At least three (3) years of experience as a group facilitator involving technical projects.

Senior Marketing Consultant

Duties: Develops marketing strategies for publications of State agencies' technology results and achievements. Develops marketing plans and recommends marketing strategies and

measurements for the success of the marketing strategies. Provides survey results for State agencies on IT topics, completes applications for IT awards and develops periodic reports of IT accomplishments, including annual reports or other marketing-related documents.

Education: Bachelor's Degree from an accredited college or university in Marketing, Business, Communications or other related discipline. A Master's degree is preferred.

General Experience: At least eight (8) years of marketing or communications experience.

Specialized Experience: At least five (5) years of experience in technology marketing or a related field.

Senior Market Research Consultant

Duties: Develops marketing and promotion strategies and tactics. Evaluates concepts for advertising campaigns. Develops and manages qualitative market research studies and develops reports. Analyses web site traffic and develops quantitative reports. Reviews marketing campaigns and their impact on web site audience behavior. Develops online survey questionnaires and launches surveys. Performs statistical analyses of responses to online surveys. Conducts various Internet analyses. Develops methodologies for optimum study results.

Education: Bachelor's Degree from an accredited college or university in Marketing, Business, or Statistics. An MBA or Master's Degree in Marketing is preferred.

General Experience: At least eight (8) years of marketing research experience.

Specialized Experience: At least five (5) years of experience in technology marketing or a related field.

Applications Development Expert

Duties: Provides design recommendations based on long-term IT organization strategy. Develops enterprise level application and custom integration solutions including major enhancements and interfaces, functions and features. Uses a variety of platforms to provide automated systems applications to customers. Provides expertise regarding the integration of applications across the business. Determines specifications, then plans, designs, and develops the most complex and business critical software solutions, utilizing appropriate software engineering processes – either individually or in concert with a project team. Will assist in the most difficult support problems.

Develops programming and development standards and procedures as well as programming architectures for code reuse. Has in-depth knowledge of state-of-the art programming languages and object-oriented approached in designing, coding, testing and debugging programs. Understands and consistently applies the attributes and processes of current application development methodologies. Researches and maintains knowledge in emerging technologies and possible application to the business. Viewed both internally and externally as a technical

expert and critical technical resource across multiple disciplines. Acts as an internal consultant, advocate, mentor and change agent.

Education: Preference for a Bachelor's or Master's Degree in Computer Science, Information Systems, or other related field or equivalent work experience.

General Experience: At least seven (7) years of IT and business/industry work experience.

Specialized Experience: Technical expert in IT organization. Coaches and mentors more junior technical staff. Provides technical input into the most complex and high impact IT decisions. Accountable for the most complex enterprise-wide applications and issues, translating highly complex concepts for peers and customers.

Data Security Specialist

Duties: Responsible for the planning, design, implementation and monitoring of security measures, policies, methods and procedures which safeguard the integrity of and access to enterprise systems, files and data elements. Responsible for acting on security violations. Maintains knowledge of changing technologies, and provides recommendations for adaptation of new technologies or policies. Recognizes and identifies potential areas where existing data security policies and procedures require change, or where new ones need to be developed, especially regarding future business expansion. Provides management with risk assessments and security briefings to advise them of critical issues that may affect customer, or corporate security objectives. Dependent on the criticality of secure data to the business, the impact of incumbent's work, recommendations, and decisions may increase the impact that this job has on the organization.

Education: Preference for a Bachelor's Degree in Computer Science, Information Systems, or other related field or equivalent work experience.

General Experience: At least four (4) years of IT work experience.

Specialized Experience: Has worked independently or as part of a team under general supervision and coached more junior technical staff.

Internet/Web Architect

Duties: Responsible for analyzing assigned specifications, planning, designing and developing solutions, utilizing appropriate Internet/Intranet/Extranet architecture processes supporting a wide range of content – either individually or in concert with project team members. Provides appropriate documentation for object design decisions, estimating assumptions, applets and performance metrics – as required by organization architecture process standards, or as assigned. Responsible for minimizing the issues between the client and the server applications and for the overall setup and design of the Internet and web server architecture. Impact and complexity of this job increases if organization is utilizing Internet solutions (vs. only Intranet), especially those with significant business impact (e.g., e-business).

Education: Preference for a Bachelor's Degree in Computer Science, Information Systems, or other related field or equivalent work experience.

General Experience: At least five (5) years of IT work experience.

Specialized Experience: Has worked independently or as a part of a team under general supervision and coached more junior technical staff. Technical expert in IT organization. Provides input into highly complex and high impacting decisions as it relates to area of expertise.

Telecommunications Engineer

Duties: Responsible for engineering and/or analytical tasks and activities associated with technical areas within the telecom function (e.g., network design, engineering, implementation, diagnostics or operations/user support). Performs complex tasks relating to network monitoring, operations, installation, and/or maintenance for local, off-site, and/or remote locations.

The scope of responsibility for this position includes, but is not limited to, the configuration, deployment, testing, maintenance, monitoring, and trouble-shooting of network components to provide a secure, high performance network. Duties also entail quality assurance and testing of transmission mediums and infrastructure components.

Education: Bachelor's Degree in Computer Science, Information Systems, or other related field or equivalent work experience.

General Experience: Three (3) to five (5) years of IT work experience.

Specialized Experience: Has worked independently or as a part of a team under general supervision and coached more junior technical staff.

Support personnel labor categories for all areas of expertise :

Technical Writer

Duties: Writing, editing, rewriting, and proofing documents for organization, clarity, style, grammar, spelling, punctuation, consistency, and conformance to established format, standards, and specifications. Assists in collecting and organizing information for preparation of reports and presentations. Assists in performing financial and administrative functions. Must demonstrate the ability to work independently or under only general direction.

Education: Associate's Degree in related field. A Bachelor's degree is preferred.

General Experience: A minimum of four (4) years of experience in this area.

Specialized Experience: At least two (2) years of experience in editing documents.

Project Control Specialist

Duties: Monitors financial and/or administrative aspects of assigned contracts and deliverables. Tracks and validates all client financial information, establishes and maintains master contract files, prepares and monitors status of all deliverables, tracks the value of contracts, and reports payment of government fees. Updates task reports with funding information and prepares revenue projections for all active Task Orders. Uses automated systems to track deliverables, financial transactions, and management information.

Education: High School Diploma or equivalent. An Associate's Degree is preferred.

General Experience: Must have three (3) years of experience preparing financial reports and presentations.

Specialized Experience: Compilation of financial statements, development of project schedules, using cost-accounting and labor-reporting systems, working knowledge of contract and subcontract management. Proficient in the use of spreadsheets and project management tools.

Program Administration Specialist

Duties: Assists in the preparation of management plans and various customer reports. Coordinates schedules to facilitate the completion of task order and change proposals, contract deliverables, task order reviews, briefings and presentations. Performs analysis, development, and review of program administrative operating plans and procedures.

Education: High school diploma or equivalent. An Associate's Degree is preferred.

General Experience: Must have three (3) years of experience working with project management tools and reporting systems. Is familiar with government contracts, work breakdown structures, management/business plans, and program reporting.

Specialized Experience: At least two (2) years of direct program experience in contract administration and compiling management reports. Has worked in support of a Program Manager on a government contract.

2.10 PERSONNEL QUALIFICATIONS

Contractors shall only proposal staff available at the time of the Task Order submission. In response to each Task Order, Contractors shall provide personnel that satisfy the personnel qualifications specified within Section 2.9 for each of the labor categories required under the

specific Task Order. In the event that labor categories are not identified in a Task Order, Contractors shall provide the appropriate labor categories for the Task Order from those specified in Section 2.9 that satisfy the requirements of those labor categories.

In addition to the total and specialized experience defined in the labor categories, specific areas of required expertise may be further defined in a Task Order. The Contractors shall certify that all candidates meet the required qualifications. At the option of the Project Manager, Contractor personnel may be approved for performance in multiple skill categories for which they are qualified.

Substitution of Education for Experience. A Bachelor's Degree or higher may be substituted for the general and specialized experience for those labor categories requiring a High School Diploma. Substitution shall be approved by the State Project Manager.

Substitution of Experience for Education. Substitution of experience for education may be permitted at the discretion of the State Project Manager.

Substitution of Key Personnel.

- (a) Individuals proposed and accepted as key personnel for this contract are expected to remain dedicated to the contract. Substitutions will be allowed only upon death of the person, permanent incapacitating disability or termination of employment with the Contractor, its subsidiaries and affiliates and only with the written approval of the State Project Manager. All proposed substitutes of key personnel must have qualifications at least equal to that of the person initially proposed by the Offeror which were evaluated and accepted. The burden of illustrating this comparison shall be the Contractors. The resumes of the initially proposed key personnel shall become the minimum requirement for qualifications for the duration of the total contract term.
- (b) All requests for substitutions must provide a detailed explanation of the circumstances necessitating the proposed substitutions, a resume of the proposed substitute (see paragraph (c)), and any other information requested by the State Project Manager's Agency Technical Representative to make a determination as to the appropriateness of the proposed substitution. All proposed substitutes must have educational qualifications and work experience equal to or better than the resume initially proposed for key personnel; the burden of illustrating this comparison shall be the Contractors.
- (c) Resumes shall be signed by all substituting individuals and their supervisor, and the official resume of the previous employee shall be provided for comparison purposes.

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